

MAMMOMAT 3000

		RX
Collimator holder		
Modification Instructions		
RX B7-230.092.01.01.02 Replaces:		english 10.95

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Foreword

The purpose of this modification is to enable centering of the radiation field.

Tools required

- Standard assembly tools
- Electric drilling machine with Ø 6.8 mm drill
- Tape
- 4 Washers

Parts included

The upgrade kit, part no. 63 82 866, includes the following parts:

Nr	Qty	Part	Part No.
1	1	Measuring tool	63 69 834
2	1	Measuring tool	63 69 842
3	2	Wedge	63 69 867
4	2	Clamp	63 82 563
5	2	Screw	60 32 320
6	4	Screw	60 23 469
7	4	Washer	60 56 535
8	8	Cable tie	90 11 370
9	5	Cable tie	62 21 753
10	2	Plastic bag	62 86 319

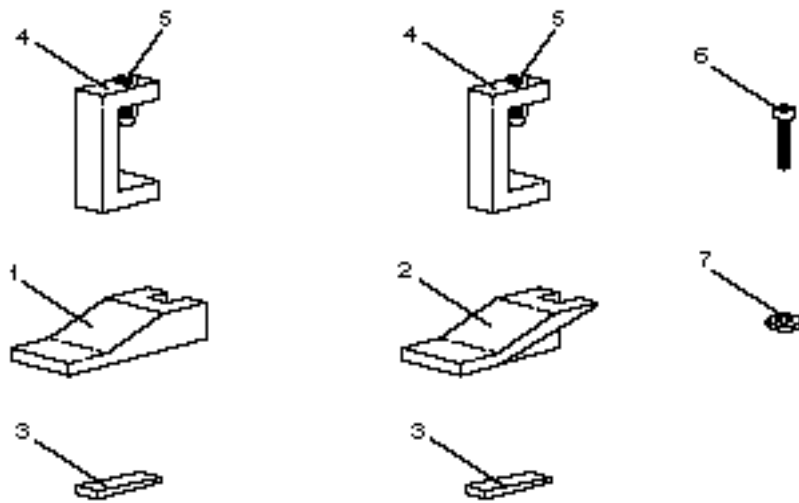


Figure 1 Upgrade kit

Registration of radiation field

- 1 Attach tape (1) along the object table sides.
- 2 Position and attach 4 washers (2) with glue on the tape as shown in *Figure 2*.

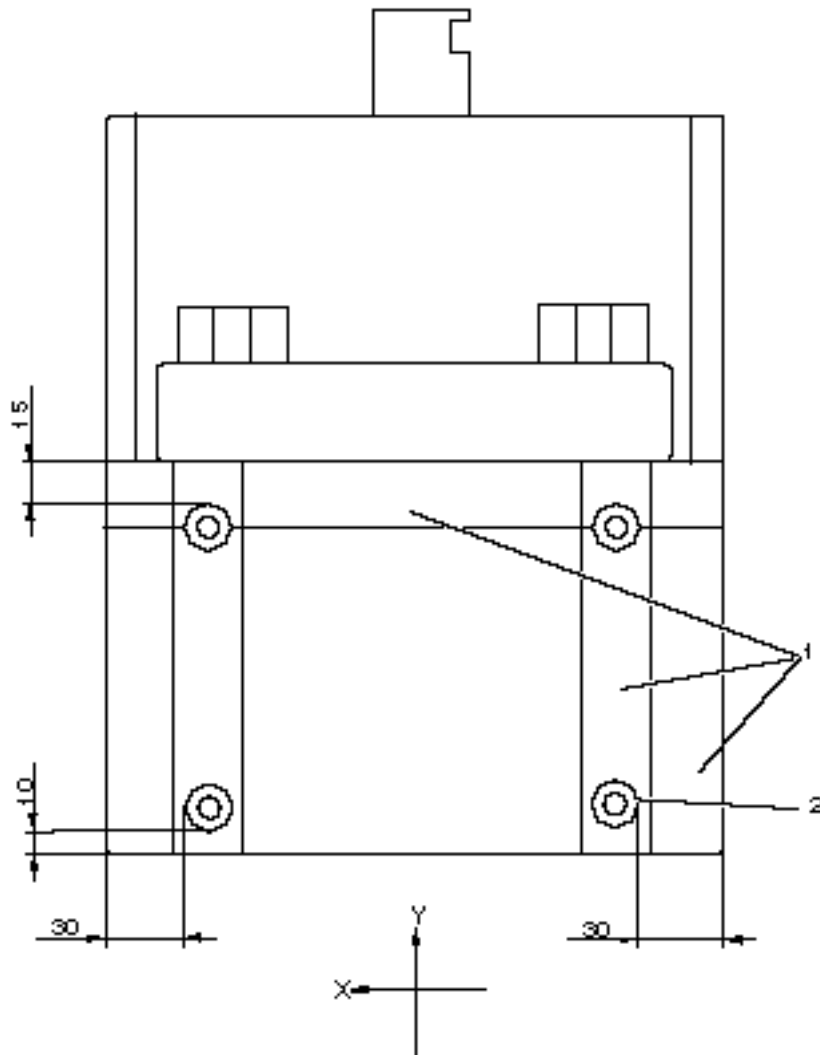


Figure 2 Object table

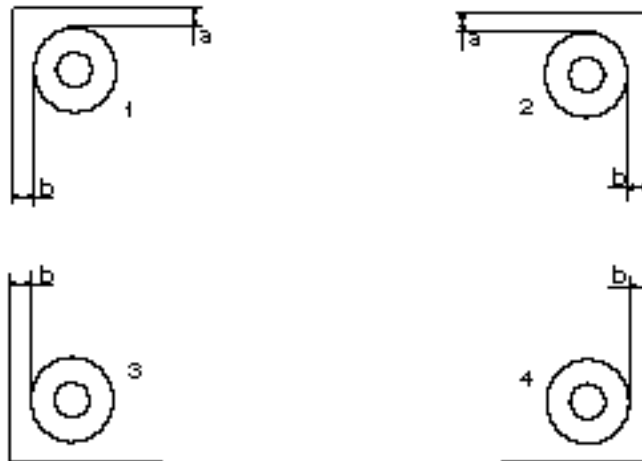
- 3 Insert a cassette with a centered film and make an exposure. Save the film as reference.
- 4 Measure and note down distances **a** and **b** between the washers and the white borders on the film (six distances in total).

NOTE! _____

Use the table over registration of radiation field to record measured values.

Table over registration of radiation field

- A Measured distances on exposed film between attached washers and white borders.
 B Measured width of white borders on exposed film.
 C Measured distances from collimator holder to tube plate (x-axis) and mounted measuring tool (y-axis).



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Date:.....

Site nr:.....

Serial nr:

Remark		A						B		C			
		1		2		3	4	White border		Distance x-axis		Distance y-axis	
		a	b	a	b	b	b	Left	Right	Left	Right	Left	Right
Reference before loosening													

Installation of measuring tools

- 1 Put the left/right measuring tool (1) on left/right side of the collimator holder (2) and secure at the upper edge by means of the wedge (3).
- 2 Put the clamp (4) with screw (5) over the collimator holder and measuring tool, lock with the screw against the measuring tool.
- 3 Measure free space (Y-axis) on both sides between measuring tool and the side wall of collimator cover (6).
- 4 Measure free space (X-axis) on both sides between the collimator holder and tube plate.

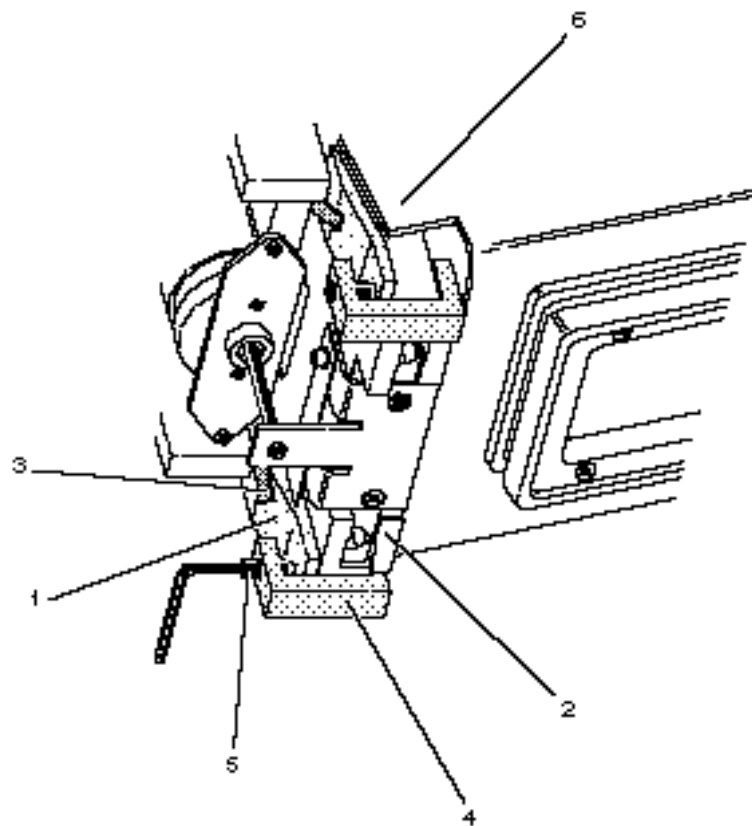


Figure 3 Installation of measuring tools

NOTE!

Use the table over registration of radiation field to record measured values.

Work-up of holes

- 1 Remove collimator protective cover by unscrewing four Allen screws.

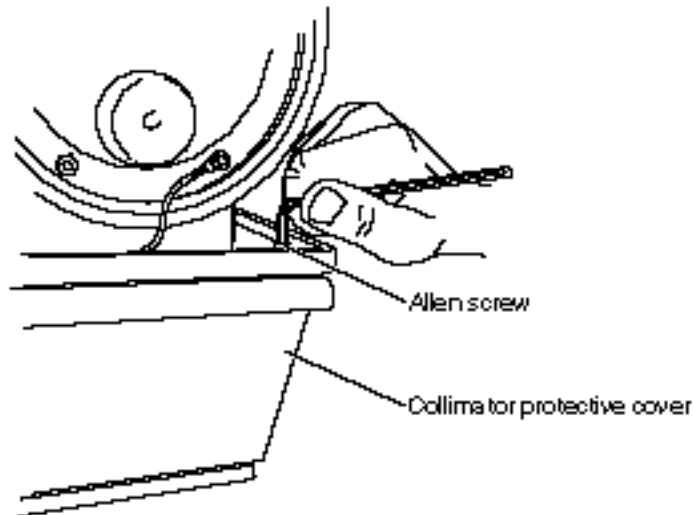


Figure 4 Removal of collimator protective cover

- 2 Disconnect cables X866, X867 and X890 from the collimator and cut off the cable ties. Notice the connector and cable-tie positions to ensure the same positioning after work-up.
- 3 Unscrew the four Allen screws holding the collimator with holder.

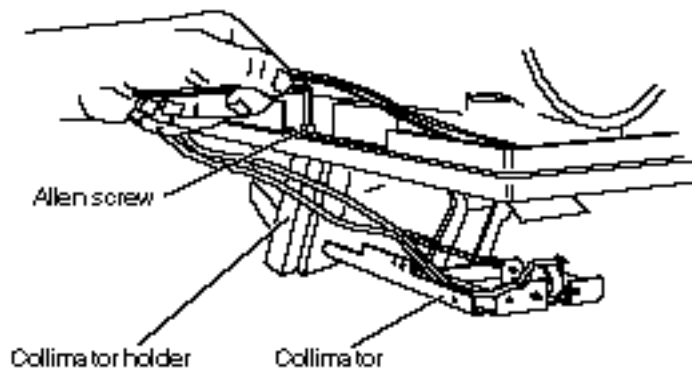
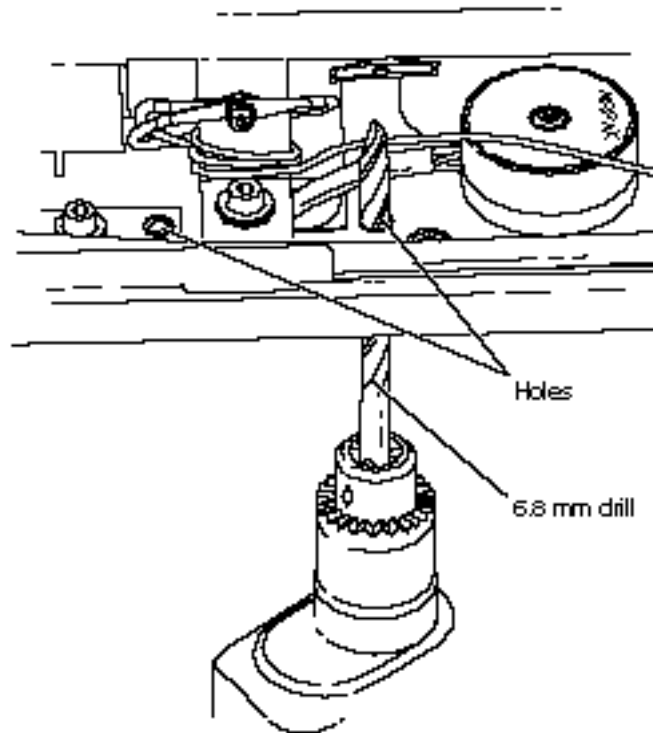


Figure 5 Removal of collimator holder

- 4 Fold down the collimator with holder and secure with a cable tie to prevent it from hanging in the cables.
- 5 Cover the collimator with a plastic bag. Protect other parts of the Mammomat with a plastic cover.

- 6 Use an electric drilling machine and Ø 6.8 mm drill to work up all four holes for the collimator holder.
- 7 If necessary, use a file to deburr.



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Figure 6 Work-up of holes

CAUTION!

Be careful not to damage any parts during drilling operation or let any drillings or filings fall down on electrical or mechanical parts.

- 8 Remove plastic bag and plastic cover carefully. Vacuum-clean the stand to remove any filings/drillings.
- 9 Remove the cable tie that holds the collimator in hanging position.
- 10 Install the collimator with the four new Allen screws and washers.
- 11 Reconnect the cables and secure with new cable ties in the same way as previously.
- 12 Install the collimator protective cover.
- 13 Check that the cable-tie heads inside the protective cover are pointing upwards.

CAUTION!

Cable-tie heads pointing in wrong direction can prevent motion of internal diaphragm near end position caused by contact with the collimator protective cover.

Checks and adjustments

- 1 Adjust the collimator for desired position, see *Figure 2* and *Figure 3*, by loosening the four Allen screws and carefully displacing it. Check against free space X-axis and Y-axis.
- 2 Tighten the Allen screws.
- 3 Release an exposure.
- 4 Compare the white borders on the film with those on the film exposed before work-up. Adjust if necessary.